INFRASTRUCTURE FINANCING STUDY

FISCAL IMPACT ANALYSIS MEMORANDUM

submitted by

duncan associates

in association with

Public and Environmental Finance Associates

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CONTENTS

LIST OF TABLES

SUMMARY

Over the past decade, the City of Lincoln has experienced a moderate but steady increase in its population base. The rate of expansion in the City's job base exceeded that of its population base. Real incomes increased significantly during this time, and these factors, along with an expanded retail base within the City contributed to a rapid rate of expansion in the City's sales tax revenues. Sales tax revenues, which at the beginning of the past decade were the second largest revenue source for the City had become the largest revenue source by a wide margin by the end of the decade.

These three factors—moderate rates of population growth, rates of job growth that exceed population growth, and greater productivity of the City's sales tax levy—have greatly expanded the City's revenue base over the past decade. While the City's revenue base was expanding rapidly, its expenditures increased only moderately. In real terms, per capita property taxes levied by the City have declined.

These highly favorable conditions are forecast to moderate somewhat over the next five years. While the City had added 1.08 new jobs per new resident during the 1990's, it is forecast to add 0.94 new jobs per new resident over the next five years. This could cause a slowdown in the rate of expansion of the City's nonresidential real property tax base. The rate of expansion of the City's sales tax collections could also decline as a result of a slowdown in the regional and national economy and other factors.

On the expenditure side, the City is currently planning to expand some key services, including libraries and fire. The City has also recently increased spending for major rehabilitation of its streets and highways. Even so, somewhat higher outlays than currently scheduled may be necessary to keep pace with the needs for major repair and rehabilitation of the City's streets and highways and its other infrastructure. **Accordingly, expenditures are forecast to increase at a somewhat greater rate over the next five years than during the past decade, but the City's revenue base is forecast to experience a somewhat slower rate of increase during this time.**

If both of these conditions occur (a higher rate of increase in expenditures and a lower rate of increase in the revenue base), it could exert modest upward pressure on the City's real property tax levy. Of course, actual conditions could vary from those forecast herein, and even if the forecast proves correct, the City could choose other options, including holding down the rate of increase in expenditures. It should also be noted that the forecast does not include any change in intergovernmental revenues, nor does it include any major new programs or spending initiatives such as a major new highway around the eastern and southern part of the City.

Overall, the City may experience some fiscal pressures on its general purpose funds over the next few years. Barring a severe economic downturn or major new spending initiatives, these pressures are likely to be modest. The City's recent and expected growth rates are manageable. Demands for higher levels of service are likely to be expressed over several years and the movement to these

higher levels of service will likely be able to be accommodated without the need for significantly higher tax rates, assuming current fiscal structures remain intact.

Annual net deficits[1] attributable to new residential development ($197 per dwelling unit) are only moderately greater than those attributable to the City's existing residential units ($165). Over the past decade these somewhat higher deficits have had only a modest impact on the City's fiscal position. Robust job growth and an expanded retail base (made possible in part by new residential development) have more than offset these somewhat greater deficits, since nonresidential development generates an annual net fiscal surplus ($128 per job). Some of the demands for service created by new development over the past decade are beginning to impact the City's budget, particularly for libraries and fire. Cumulatively, as new development continues to change the City's economic, demographic and physical characteristics, newer development will likely continue to slowly exert demand for higher levels of service for some functions.

The City's utility systems operate under separate budgets—from each other and from the City's general purpose budget. The water and wastewater systems each have substantial capital balances on hand that are expected to be largely expended by FY 2006. But the need to meet more stringent regulatory requirements and to add capacity to accommodate expected new development will continue to create a need for additional infrastructure improvements after that time. New development will contribute towards its share of these costs, but over a full financing cycle of 25 years, new residential development will likely contribute less towards these facilities than what it costs to provide them. The major factors affecting this is the internal balance between capital and operating costs embedded within the City's utility rates, and its capital financing policies.

A recent agreement between LES and Norris Public Power District is expected to allow expansion of LES's service area into the area surrounding the City without placing an undue burden on existing ratepayers.

[1]A "net deficit" refers to an excess of expenditures over revenues generated by new residential development. It does not mean that the City is operating at a deficit.

FISCAL TRENDS, 1990-1999

During the 1990s, growth in the nonresidential sector of Lincoln's economy far outpaced residential growth. Between 1990 and 1999, Lincoln's population increased 13 percent, from 191,972 persons to 217,537 persons. However, during the same period, the number of non-farm jobs in Lancaster County increased by almost 25 percent, from 121,698 to 150,880 (95 percent of these jobs are assumed to be located within the City of Lincoln). Most of the increase in non-farm jobs is attributable to increased private sector employment. The higher rate of growth in jobs relative to population caused the City's ratio of jobs to population to increase significantly from about .602 in 1990 to .659 in 1999.

During the past decade, the City's private non-farm job base expanded at almost twice the rate of its population. The City's favorable ratio of job to population growth is likely attributable to a combination of higher employment rates, higher labor force participation rates among persons living within the City, and an increase in net commuters.

Real incomes have also increased significantly over the past decade. Per capita personal income increased from $17,816 in 1990 to $27,357 in 1999. In constant 1999 dollars, this represents a real increase from $22,965 to $27,357, or about 19 percent.

During the same period, the City also experienced a significant expansion in its real property tax base. Total assessed real property value in the City increased from $6.885 billion to $8.424 billion in real 1999 dollars. This represents an increase of about 22 percent, after adjusting for a change in assessment methods that occurred between 1993 and 1994.[2] On a per capita basis, real property value increased by about 8 percent in real terms from $35,869 to $38,724.

Much of this increase came from the City's nonresidential property tax base. Commercial property value accounted for 20 percent of the City's real property tax base in 1990. By 1999, it accounted for 28 percent.

The City's real property tax levy increased in the early part of the past decade, but then declined substantially in the latter years. Overall, the City's real property tax levy declined by 12 percent between 1990 and 1999 (adjusted for the change in real property tax assessment procedures between 1993 and 1994).

In fiscal year 1990, per capita residential property taxes amounted to $104 in constant 1999 dollars.[3] By 1999, this amount had declined by 13 percent to $90. The average real property taxes

[2]Between 1993 and 1994 the County Assessor changed its method of real property tax assessment. The data herein are adjusted for this change by adjusting 1990 - 1993 values upward to reflect current assessment practices.

[3]$81 in current year dollars. Excludes motor vehicle in lieu of ad valorem taxes.

paid per private non-farm job in 1990 was $64 constant 1999 dollars. In 1999, this amount increased somewhat to $68.

Table 1
FISCAL TRENDS SUMMARY

	1990	1999	Change
Population	191,972	217,537	13.3%
Jobs (county)	121,698	150,880	23.9%
Per Capita Personal Income	$22,965	$27,357	19.1%
Property Tax Base (billions)	$6.626	$8.424	27.1%
Property Tax Base per Capita	$34,515	$38,724	12.2%
Property Tax Payments per Capita	$104	$90	-13.5%
Property Tax Payments per Job	$64	$68	4.9%
Total General Government Outlays (millions)	$94.0	$116.3	23.7%
General Government Outlays per Capita	$490	$535	9.2%

Note: 1990 dollar amounts are expressed in 1999 dollars

Over the past decade, sales tax revenues increased from the second largest source of revenue for the City to become its single largest revenue source. In the current Fiscal Year 2000, sales tax revenues are budgeted to far exceed property tax revenues ($42.17 million compared to $26.64 million).[4] Between FY 1990 and FY 1999, the City's total sales tax revenues increased by 39.3 percent in constant dollars. However, the growth rate in sales tax revenues could begin to slow over the next few years with the South Pointe mall now approaching fully occupancy. A slowdown in the rate of growth of per capita personal income could affect the rate of growth of sales tax revenues.

On the expenditure side, total general purpose outlays (in 1999 dollars) increased by about 24 percent—from $94 million in 1990 to $116 million. On a per capita basis, gross general purpose outlays increased in real terms by 9.2 percent. A more detailed analysis of the City's expenditure trends on both a population and functional demand unit basis provides further insight into the City's recent expenditure trends.

Both per capita and per demand unit approaches are applied to analyze the City's expenditure trends over the past decade. During the past decade, per capita outlays for human services showed the greatest percentage increase—about 63 percent in real terms. However, part of this increase was attributable to the Health Department's assumption in 1998 of a Medicaid access program

[4] Annual Operating Budget, FY 1999 - 2000, City of Lincoln, p. 22.

previously run by the State. After adjusting for this increase, per capita outlays for human services increased by about 48 percent, with much of this increase attributable to the rapid rate of growth in health care costs during the past decade.

Per capita outlays for economic opportunity and public safety increased in real terms by about 16 and 13 percent, respectively. Per capita general government administration outlays were up about 5 percent in real terms, but these exhibited substantial year to year variation. Per capita outlays for streets and highways increased by less than 2 percent while such outlays for debt service declined by 14 percent in real terms, and those for culture and recreation declined by 3 percent.

Table 2
REAL GENERAL GOVERNMENT EXPENDITURES, 1990-1999

	Real Expenditures ($ millions)			Real Per Capita Expenditures		
Expense Category	**1990**	**1999**	**Change**	**1990**	**1999**	**Change**
General Government	$18.3	$21.9	20%	$95.45	$100.63	5.4%
Public Safety	$32.6	$41.6	28%	$169.66	$191.03	12.6%
Streets and Highways	$8.2	$9.4	15%	$42.46	$43.24	1.8%
Culture and Recreation	$11.8	$13.0	10%	$61.57	$59.76	-2.9%
Economic Opportunity	$7.7	$10.1	31%	$39.90	$46.32	16.1%
Health and Welfare	$6.1	$11.2	84%	$31.67	$51.61	63.0%
Debt Service	$9.4	$9.2	-2%	$49.10	$42.20	-14.1%
Total Expenditures	$94.1	$116.4	24%	$489.81	$534.79	9.2%

Source: City of Lincoln, *Comprehensive Annual Financial Report, FY Ended August 1999*; 1990 figures adjusted to real 1999 dollars based on CPI-U factor of 1.289; per capita amounts based on population estimates of 191,972 and 217,537 for 1990 and 1999 (see Table 5).

Some of the increase in gross per capita outlays likely reflects an increase in the demand for services by the City's nonresidential sector. As the City's job base has grown, the need to provide services to its nonresidential sector has also increased. Due to the more rapid rate of growth in the City's job base, population-based measures may not be fully reflective of these trends. Demand unit measures (which are done on a functional basis) reflect the costs of providing services on a functional demand unit (FDU) basis, and better account for changes in costs of services provided to both the residential and commercial sectors.

An FDU converts the City's at-place private non-agricultural employment to their population equivalent for those services which are provided to the City's households and businesses. Culture and recreation, along with health and welfare, primarily serve the City's households. Accordingly, the number of functional demand units for these functions is the City's population. Public safety services and streets and roads serve both households and places of employment. Based on police call-for-service and fire incident data, one job is equivalent to three-quarters of a person in terms of demand for public safety service. Based on vehicle-miles of travel generated, one job is the equivalent of 1.6 persons in terms of demand on the road system. Economic opportunity is primarily for the benefit of the City's businesses (and indirectly its residents). Accordingly, the

number of functional demand units is equal to the City's private at-place non-agricultural employment.

When outlays are viewed on a per functional demand unit (FDU) basis, they are shown to have increased substantially for health and welfare (63 percent), moderately for public safety (9 percent), and to have exhibited modest to moderate declines for all other functions.

Table 3
REAL EXPENDITURES PER DEMAND UNIT, 1990-1999

Budget Category	Demand Units	1990	1999	Change
General Government	population + private non-farm jobs	$66.24	$66.17	-0.1%
Public Safety	population + 0.75 x non-farm jobs	$116.87	$127.85	9.4%
Streets and Roads	population + 1.60 x non-farm jobs	$21.63	$21.05	-2.7%
Culture and Recreation	population	$61.57	$59.76	-2.9%
Economic Opportunity	private non-farm jobs	$90.46	$88.95	-1.7%
Health and Welfare	population	$31.67	$51.61	63.0%
Debt Service	population + private non-farm jobs	$39.57	$33.40	-15.6%

Source: Expenditures by category in real 1999 dollars from Table 2 divided by 1990/1999 demand units based on population and employment in Table 5.

Over the past decade the City has experienced highly favorable economic and fiscal outcomes. These include a high rate of job growth relative to population growth, a significant increase in per capita property values, and a burgeoning retail sector that has translated into much higher levels of sales tax revenues. These favorable conditions have allowed the City to reduce its real property tax rates while maintaining essentially stable service levels for most City services (with the exception of health and welfare and public safety which have risen).

MAJOR REPAIR AND REHABILITATION NEEDS

The overwhelming majority of the value of the City's general government plant-in-service (its in-place infrastructure) consists of its streets and highways. The replacement cost of the City's plant-in-service is approximately $934 million, 88 percent of which consists of its streets and highways. Accounting for a distant second are general government administration buildings ($72 million), followed by parks and recreation facilities ($20 million, excluding golf courses), library ($11 million), fire ($9 million) and police facilities ($1.4 million).[5]

The annual major repair and rehabilitation (MRR) needs for the City's plant-in-service are a function of the age and useful life of its individual facilities. For any particular facility, there is ordinarily an inverse relationship between its annual MRR needs and its age. At the beginning of its useful a facility's annual MRR needs are ordinarily lower than they are towards the end of its useful life. But the City's infrastructure was not constructed at a single point in time. Nor do its various facilities share the same useful life.

It is beyond the scope of this study to identify and determine the current age, and individual useful life schedules for the City's plant-in-service. However, an estimate for the range of the City's annual MRR needs can be derived based on its plant-in-service. For streets and highways, this estimate can be compared to the Department of Public Works planned outlays for MRR.

The City's annual MRR needs are estimated by assuming a factor by which these needs deviate from the average.[6] For example, streets and highways have a useful life of 60 years. But at the beginning of a roads life cycle, its annual MRR needs are assumed to be the equivalent of a road having a useful life of 180 years. An exponential scale is then applied which results in an estimate of annual MRR needs at the midpoint of the life cycle that is approximately 2 times greater than at the beginning of the life cycle and 10 times greater at the end.

The midpoint is used herein, based on the assumption that the City's facilities are, on average, at the midpoint of their life cycles. This methodology provides an approximation of the City's annual MRR needs. This methodology is validated by comparing the results obtained to the annual MRR outlays for streets and highways estimated by the City's Department of Public Works in its long-term planning projections.

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[5] Streets and roads based on memo from Public Works. All others based upon insured coverage. Libraries includes buildings only. Police includes buildings and one-half outside structures and contents. Some departments are housed within the City's general administration buildings and their plant-in-service is included in this category.

[6] One-third and one-and-one half times the average for all facilities except parks. Parks are based on one-half and two times the average.

The methodology results in an estimate of the City's annual MRR needs for general purpose facilities of about $10.8 million. Approximately $9.1 million of this amount is attributable to streets and highways. This is about 18 percent greater than the Public Words Department forecast of $7.7 million average annual MRR outlays for streets and highways over the next twenty-five years. It should be emphasized that this is an approximation and that the actual MRR needs may be more or less than this amount. A more precise estimate would require an item-by-item inventory of the City's plant-in-service along with its date of acquisition or last major renovation, its associated replacement cost, and the selection of the appropriate useful life.

The City spent $5.4 million in MRR for its streets and highways in FY 1999. This is substantially greater than what such outlays have been over the last decade. Interviews with Public Works staff confirm that the City has been under-funding its MRR needs for streets and highways over the last decade. The recent increase in the MRR outlays reflects a change in policy to "catch up" with MRR needs for streets and highways.

The City has substantially increased its annual MRR outlays for streets and highways since 1990 when these outlays amounted to $3.3 million in real dollars. Nevertheless, the City is still under-funding its annual MRR needs for streets and highways. The amount of under-funding ranges between $2.3 and $3.7 million.

Although the City has not made an internal estimate of MRR outlays for its other facilities, their annual MRR needs can be estimated. The methodology developed in this study for streets and highways is applied to the City's other facilities to determine their midpoint of life cycle annual MRR needs. This amount is adjusted downward by the difference between the estimated annual MRR needs for streets and highways and the outlays forecast by the Public Works Department to obtain a reasonable range for the City's annual MRR needs. As shown in Table 4, the City's estimated annual MRR needs range between $9.3 and $10.8 million.

Table 4
ANNUAL MAJOR REPAIR NEEDS, GENERAL PURPOSE FACILITIES

Facility	Lower Estimate	Upper Estimate
Streets and Roads	$7,760,000	$9,060,191
General Government	$812,532	$948,672
Parks and Recreation (excluding golf courses)	$433,372	$505,984
Libraries	$130,237	$152,058
Fire	$100,602	$117,458
Police	$16,454	$19,211
Total	$9,253,197	$10,803,574

MID-TERM FISCAL OUTLOOK

Over the past decade, the City has been able to lower its tax burden while keeping service levels for most services essentially stable (with the exception of health and welfare and public safety, which have risen). Lower real property tax levies were made possible primarily by an expanded real property tax base, a larger job base relative to the City's population, and higher levels of sales tax revenues. These factors have produced lower per capita real property tax burdens coincident with an expansion of the City's population and job base.

Over the next five years, the ratio of net new jobs relative to net new population could decline. This is possibly due to lower labor force availability within the region and a slowdown the rate of expansion of the state's economy, as recently observed by the University of Nebraska's Bureau of Business Research. The rate of increase in sales tax revenues could also decline during this time if there is also a slowdown in the rate of expansion of the City's retail base, or due to slower rates of growth in personal income. The increasing influence of online retailing could contribute to a slower rate of expansion in the City's retail base. Of course, sales tax revenues are also highly cyclical, and a slowdown (or expansion) in the national or regional economy would have a significant affect on these receipts.

A mid-term (five-year) forecast is used in this report to estimate the City's expenditures. This forecast considers anticipated new development, anticipated increases and recent trends in expenditures, and estimated annual major repair and rehabilitation needs. The forecast contained herein is not a prediction. Rather, it is a potential growth forecast based on recent trends, existing conditions and other regional forecasts. Generally, the forecast used in this report anticipates a slowdown in the rate of new job growth, and a modest decline in the ratio of net new jobs to net new population. Unanticipated changes in national, regional and international conditions can affect these factors and cause future conditions to deviate significantly from this forecast. In the short run, a business location or relocation decision by a single large company or multiple medium-size companies could also cause actual conditions to deviate significantly. Accordingly, the forecast herein should be viewed as only one possible outcome in a range of potential outcomes.

The County's population is forecast in the Nebraska Data Book (1999) to increase from 240,857 persons in 2000 to 248,175 in 2005. By this time, the City anticipates its share of the County's population would be 230,845 for an average annual growth rate of about 1.0 percent. This would cause the City's share of the County's population to increase from 92.5 percent in 2000 to about 93 percent in 2005. This represents a continuation of the trend over the last ten years for a greater share of the County's population to reside within the City. Between 1990 and 1999, the percentage of County residents residing within the City rose from 89.9 percent to about 91.4.

The Nebraska Department of Labor estimates the State's at place non-agricultural employment to have been 890,820 in 1999. This represents an annual average growth rate of 2.3 percent since 1990. By comparison, the City's at place employment increased by an average of 2.7 percent

annually between 1990 and 1999. Lancaster County's at place employment as a share of the State's grew from 16.6 percent in 1990 to 16.9 percent in 1999.

At-place employment for the State is projected by the U.S. Bureau of Economic Analysis to increase by 7.4 percent between 1999 and 2005. This is an average of 1.2 percent per year, or about half the average annual rate of expansion during the past decade. The County's share of the State's at place employment is expected to continue to increase to 17.1 percent over the next five years. This is a continuation of the trend over the past decade for a greater share of the State's at place non-farm jobs to be concentrated in Lancaster County. For purposes of this report, 95 percent of all at place non-farm jobs in the County are expected to be located within the City. Accordingly, the City's at-place non-farm jobs are forecast to be 155,677 in 2005. This represents an increase of 6.9 percent from 2000, or an average of about 1.4 percent annually. Although this is a significant decline in the rate of growth from the past decade, by the latter half of the past decade the rate of growth in at place non-farm jobs had already declined to just under 2.0 percent.

Table 5
POPULATION AND J0B GROWTH, 1990-2005

	1990	1999	2000	2005
Population, Lancaster County	213,641	235,239	240,857	248,175
Population, City of Lincoln	191,972	217,537	220,104	230,845
City as % of County Population	89.9%	92.5%	92.5%	93.0%
Non-Farm Employment				
State of Nebraska	731,108	890,820	903,013	956,332
Lancaster County	121,698	150,880	153,243	163,871
County as % of State	16.6%	16.9%	17.0%	17.1%
City of Lincoln (95% of County)	115,613	143,336	145,581	155,677
Private Non-Farm Employment				
Lancaster County	89,128	117,686	not est'd	127,819
Private as % of Total Non-Farm	73%	78%		78%
City of Lincoln (95% of County)	84,672	111,802		121,428

Source: County population forecast for 2005 from University of Nebraska, Bureau of Business Research, Nebraska County Population Projections, February 1999; City 2005 population forecast from Lincoln/Lancaster County Planning Dept.; state non-farm employment derived from Nebraska Department of Labor, Labor Market Information, February 2000, cited in the Nebraska Data Book (http://info.neded.org) last updated June 28, 2000; County 1999 non-farm employment estimated from 1998 jobs using annual growth rate of 2%; County non-farm employment projection for 2005 based on state projection and percent in County; County private non-farm employment projection for 2005 based on 1999 percent private. Unless otherwise noted, data for 2000 estimated by consultant based on rates of growth for 1998-1999.

This forecast is consistent with others for the state and regional economy. A recent BBR publication notes that "Despite the robust national economy, Nebraska's economy has started an employment growth slowdown. The slowdown is the result of tight labor markets across the state

and the impact of a continuing decline in the agricultural sector."[7] An earlier BBR report prepared for the City of Omaha in 1999 also forecast a decline in the rate of job growth for the Omaha region for this decade.[8]

As noted earlier, the City significantly increased its per capita real property tax base over the past decade. This was a result of its job base increasing at a higher rate than the population base. This in turn was likely caused by a combination of several factors, including a higher employment rate, higher labor force participation, and an increase in net commuters.

Since the County's current unemployment rate of 1.9 percent (1999) is already low, employers do not have a large number of unemployed residents on which to draw to fill new jobs. The rate of labor force participation may also be limited over the next few years since many job-age residents who previously did not participate in the labor force earlier have probably entered (or re-entered) the labor force over the last decade due to expanded job opportunities. Accordingly, new job creation in Lancaster County will likely require either higher rates of population in-migration to the region, an increase in commuters, or both. If there is an increase in the former, it could cause the rate of increase in the City's per capita real property tax base to slow. Because Lancaster-area jobs draw on part of the same commuter-shed as the Omaha region, employers in Lancaster County will be competing with those in the Omaha region for many of the same workers willing to commute. These factors could cause a greater portion of new jobs in the County to be filled by in-migrants than previously.

Over the past decade, the City added 1.08 net new jobs for each net new resident. Over the next five years, the City is forecast to add 0.94 net new jobs for each net new resident. A lower level of jobs relative to new population could cause pressure on the City's real property tax levy if current and planned spending levels are maintained. If the City were to also experience a decline in the rate of growth of retail sales taxes, this could exert additional pressure on its real property tax levy. It should be emphasized that neither of these factors would necessarily cause an increase in the city's property tax levy, and that any such pressure would be relatively modest. The City may choose to other means to deal with these pressures by reducing or holding down the rate of increase in expenditures, raising other non-tax revenues, or both. Furthermore, intergovernmental revenues could increase and offset some of these pressures.

Nevertheless, during the next five years, the City will face upward pressure on the expenditure side from a combination of currently anticipated changes in existing service levels and increased spending on major repair and rehabilitation (MRR) of its existing capital facilities.

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[7] *Business in Nebraska*, Vol 56, No. 651, Bureau of Business Research, September 2000. A "business slowdown" is defined as a decline in the rate of growth.

[8] "Omaha Area Projections to 2050," Bureau of Business Research, University of Nebraska-Lincoln, June 1999, p. 25. The average annual rate of growth in Omaha area non-farm employment by industry is reported to be 3.2 percent between 1995 and 2000, and forecast to be 2.1 percent between 2000 and 2010.

Based on Department of Public Works estimated outlays and the annual MRR needs estimated here, annual MRR needs for streets and highways are underfunded at recent levels. However, under-funding of MRR ordinarily does not occur for just one group of facilities. When one such group experiences substantial under-funding of its MRR needs, it is likely that other facilities needs are also not being met. For purposes of projecting the City's fiscal position, it will be assumed that the City's other facilities are under-funded by a similar percentage as its streets and highways. On the basis of this assumption it is estimated that the City is currently under-funding MRR needs by between $2.8 - $3.2 million annually. For purposes of the fiscal forecast the midpoint of $3.0 million is used.

Extensive interviews with City staff were conducted as a part of this study. During the course of these interviews, some anticipated service improvements were identified. Two new fire companies will be needed to staff two new fire stations anticipated in the adopted CIP. A third station at the end of the current CIP is also anticipated which would require an additional company. The estimated annual operating cost per company is about $600,000 annually. Completion of all three stations, will result in an additional expenditure of $3.6 million annually for the City's fire department.

Two new branch libraries are scheduled to open in 2002. Annual operating costs attributable to these new facilities are estimated to be $1.4 million inclusive of maintenance of buildings and grounds.

These constitute the major identified service improvements not reflected in current spending levels. It should be noted that these identified service level improvements will occur incrementally over about the next five years. For purposes of this study, it is assumed that all identified service level improvements will be implemented over the next five years. The total additional outlays for these identified service level improvements is $5 million annually.

Other factors can also affect service levels (as expressed in outlays per capita or per functional demand unit). Most prominent among these factors are changes in the economic and demographic characteristics of the community, and changes in state and federal policies.

Other studies have shown that as the demographic and economic characteristics of the community's population and job base change, its service levels can also be affected. The extent to which this occurs depends on both the degree and the rate of change in these characteristics. Public safety and cultural and recreational functions are typically among the first to exhibit higher levels of growth-related demands for service. And, indeed, the City is implementing plans for higher levels of service for these services over the next five years.

There have been discussions about a major new highway extending around the southern part of the City. This highway would link to existing roads to both the east and west. No costs for this improvement have been included in the 2005 estimate for the City's streets and highway outlays.

If this road is built, it would likely require a significant local contribution. Related capital funds (or debt service) would likely cause higher outlays over and above those forecast in this report.

As a community becomes more successful at attracting new jobs, its per capita and per job outlays for economic development activities tend to decline somewhat. Typically, as a community becomes a more desirable job location, it tends to expend less (per job) to achieve additional job base expansion. Economic development outlays also tend to be cyclical and can exhibit a high degree of year to year variability. However, economic development remains a continued priority for the City as demonstrated by recent recruitment efforts for a potential major new employer. Accordingly, outlays per job for economic opportunity are projected to remain at current levels.

The City's general government outlays have been highly variable over the past decade, ranging from $57 to $93 per functional demand unit in 1999 dollars. For purposes of this analysis, the 10-year average of $68.81 ($3 greater than FY 1999 outlays) per functional demand unit is applied.

Per capita health and welfare outlays have experienced the greatest increase in percentage terms over the previous decade. These increases have occurred during a time when federal policies have caused substantial changes in the financing and delivery of human services. The City appears to have made spending on health and welfare services a priority over the last decade as evidenced by a substantial increase in its per capita outlays for these services, even after adjusting for the Health Department's assumption of the Medicaid access program from the State in 1998. For purposes of this report, per capita outlays for health and welfare are forecast to continue to increase, but at a substantially slower rate (two percent on average) than over the past decade.

Without any new voter approved debt, debt service is projected by the City to decline by 7 percent based on the five-year forecast in the City's FY Budget.[9] However, new bond referendums to support planned capital improvements are anticipated to go before the voters over the next five years and it is likely that some will be approved. Accordingly, debt service is forecast to remain at current levels.

Based on these factors and the population and at place employment forecasts, the City's general purpose outlays in 2005 are forecast to increase by about 13.7 percent in real terms over current levels, as shown in Table 6. This equates to an average growth rate in expenditures of about 2.22 percent per year in real terms. This is about the same rate of growth in the City's overall expenditures as occurred during the past decade.

During the past decade, there were about 1.08 net new jobs for each net new resident in the City. Based on BBR's forecast employment and the City's forecast population, the number of net new jobs per net new resident is expected to decline moderately by 2005 to about 0.94. Although this is a respectable ratio for many growing communities, it is lower than the City experienced over the

[9]City of Lincoln, *Council Adopted Annual Operating Budget, FY 1998-99*, p.2.

past decade. A decline in this ratio could cause the rate of growth of the City's revenue base to be somewhat lower—in both absolute and per capita terms—than in the past decade.

To meet forecast outlays for 2005, the City's revenues will also need to grow by about 13.7 percent in real terms, or an average of 2.3 percent per year. By way of comparison, the City's revenues grew in real terms by an average of 2.64 percent per year between 1990 and 1999.

This forecast assumes no new major revenue sources or tax increases. Nor does it include any local outlays for major expansion of the City's road network or other significant new spending initiatives other than those discussed herein.

Table 6
GENERAL PURPOSE EXPENDITURE FORECAST, 1999-2005

Budget Category	1999 Budget	2005 Budget	Change
General Government	$21,891,000	$24,240,000	10.7%
Police	$24,186,000	$25,864,000	6.9%
Fire	$17,370,000	$20,970,000	20.7%
Streets and Roads	$9,406,000	$10,102,000	7.4%
Parks and Recreation	$8,332,000	$8,847,000	6.2%
Libraries	$4,667,000	$6,067,000	30.0%
Economic Opportunity	$10,076,000	$10,943,000	8.6%
Health and Welfare	$11,226,000	$13,104,000	16.7%
Debt Service	$9,181,000	$9,181,000	0.0%
Major Repair and Rehabilitation Deficit	n/a	$3,000,000	n/a
Total	$116,335,000	$132,318,000	13.7%

Source: City of Lincoln *Comprehensive Annual Financial Report for Fiscal Year Ended August 31, 1999*; 2005 projections based on population and employment projections from Table 5 and 1999 expenditures per demand unit from Table 3, with following exceptions: general government uses 10-year 1990-1999 average of $68.81 per demand unit rather than 1999 value due to high variability; fire is 1999 level plus additional $3.6 million estimated cost to operation two new stations, libraries is 1999 level plus additional $1.4 million to operate new libraries and health and welfare assumes 2% annual average increase in per capita expenditures; MRR deficit described in text. Note, some CAFR budget categories are dis-aggregated for projection purposes based on the 1999 FY actual amounts reported in the FY 2000 Budget for the City of Lincoln.

GENERAL PURPOSE COST-OF-SERVICE ANALYSIS

This report applies a cost-of-service methodology, which first allocates the components of the City's budget among its residential and nonresidential sectors. This establishes an estimate for the amount of general purpose revenues and expenditures attributable to each sector. When divided by the number of demand units (dwelling units for the residential sector, jobs for the nonresidential sector) this results in a determination of costs, revenues and net surplus or deficit per existing dwelling unit and job. For the residential sector, unit costs and revenues (by major category) that are sensitive to the characteristics of new residential development are also adjusted to reflect these characteristics. This results in an estimate of costs, revenues and net general purpose surplus or deficit attributable to new residential development.[10]

Unlike the previous sections, which relied on aggregated summary data on the City's general purpose expenditures provided in the *Comprehensive Annual Financial Report* (CAFR) for the last ten year to analyze historical trends and develop a mid-term budget forecast, this section uses a more detailed analysis of the most recently completed fiscal year. A number of funds were included in this analysis that are not included in the CAFR's summary of general government expenditures.[11] For this reason, the total FY 1999 expenditures identified in this section are somewhat higher than those identified in previous sections.

The average existing dwelling unit in the City of Lincoln generates an annually recurring net deficit of approximately $165. This is inclusive of all major funds used to support operating and capital outlays for the City's general purpose operations and facilities, but excludes the portion of sales tax revenues, building permit and fee revenue and reimbursements and related inspection expenses, and developer's cash contributions attributable to new construction.[12]

[10]The allocation methodology used for cost of service analyses relies on direct and indirect sources and estimates to allocate costs and revenues between the City's residential and non-residential sectors. The results are an approximation only.

[11]Included in this section's analysis of general purpose revenues and expenditures are the City's general fund, special revenue funds for libraries, agency on aging, Lincoln/Lancaster health, snow removal, 911, social security, street construction, unemployment compensation, keno, federal grants, special assessments, building and safety, debt service funds, storm sewer construction, street construction, vehicle tax, other capital projects and special assessment capital project funds.

[12]Sales tax revenues attributable to new construction are estimated to be $1.94 million. Permit and fee revenue and related inspection expenses attributable to new construction are estimated to be $3.28 million. Developer contributions are $0.164 million.

Table 7
GENERAL FUND ALLOCATION ANALYSIS

REVENUES	Totals	Res. Share	Com. Share	Residential Amount	Commercial Amount	Per Unit	Per Job	Per New Unit
Real Estate & Pers Prop Tax	$30,287,143	70.6%	27.7%	$21,378,761	$8,387,360	$231	$59	$384
Special Assmt & Interest	$2,208,364	72.0%	28.0%	$1,590,629	$617,735	$17	$4	$0
Sales Taxes	$42,036,715	44.3%	55.7%	$19,472,588	$22,564,126	$210	$157	$273
Sundry and In Lieu Taxes	$1,098,010	72.0%	28.0%	$790,869	$307,141	$9	$2	$9
Keno Proceeds	$2,805,009	90.0%	10.0%	$2,524,508	$280,501	$27	$2	$27
Wheel Tax	$7,253,208	80.0%	20.0%	$5,802,566	$1,450,642	$63	$10	$94
Occupation Taxes	$5,918,471	0.0%	100.0%	$0	$5,918,471	$0	$41	$0
Intergovernmental	$21,671,555	57.1%	42.9%	$12,369,856	$9,301,699	$133	$65	$133
Federal	$13,620,839	50.0%	50.0%	$6,810,420	$6,810,420	$73	$48	$59
Permits and Fees	$5,308,865	70.0%	30.0%	$3,716,206	$1,592,660	$40	$11	$40
Reimbursements	$2,545,715	70.0%	30.0%	$1,782,001	$763,715	$19	$5	$19
Court Fees	$190,396	70.6%	27.7%	$134,395	$52,726	$1	$0	$1
Recreation Receipts	$1,368,383	100.0%	0.0%	$1,368,383	$0	$15	$0	$15
Donations, Sale of Assets	$6,249,180	70.6%	27.7%	$4,411,104	$1,730,573	$48	$12	$48
Parking Revenue	$848,357	10.0%	90.0%	$84,836	$763,521	$1	$5	$1
Miscellaneous	$2,954,934	72.0%	28.0%	$2,128,364	$826,570	$23	$6	$23
Total Revenues	$146,365,144			$84,365,486	$61,367,860	$910	$427	$1,126
EXPENDITURES								
General Government	$20,310,737	70.6%	27.7%	$14,336,724	$5,624,613	$155	$39	$155
Planning and Development	$1,541,305	66.8%	33.2%	$1,029,592	$511,713	$11	$3	$11
Police	$19,757,451	69.3%	30.7%	$13,691,914	$6,065,537	$148	$42	$166
Fire	$14,188,694	80.0%	20.0%	$11,350,955	$2,837,739	$122	$20	$138
911	$1,637,907	74.7%	25.4%	$1,222,698	$415,209	$13	$3	$13
Inspections	$643,598	20.0%	80.0%	$128,720	$514,878	$1	$4	$1
Traffic Engineering	$1,358,420	66.8%	33.2%	$907,425	$450,995	$10	$3	$10
Street Maintenance	$2,811,686	48.1%	51.9%	$1,353,343	$1,458,343	$15	$10	$15
Street Construction	$3,497,855	48.1%	51.9%	$1,683,615	$1,814,240	$18	$13	$18
Street Lighting	$2,836,370	66.8%	33.2%	$1,894,695	$941,675	$20	$7	$20
Parks and Recreation	$13,198,793	100.0%	0.0%	$13,198,793	$0	$142	$0	$163
Libraries	$4,788,329	100.0%	0.0%	$4,788,329	$0	$52	$0	$59
Economic Opportunity	$6,689,970	0.0%	100.0%	$0	$6,689,970	$0	$47	$0
Health and Welfare	$11,226,188	100.0%	0.0%	$11,226,188	$0	$121	$0	$97
Current-Funded Capital	$29,256,625	57.5%	42.5%	$16,812,726	$12,443,899	$181	$87	$181
Debt Service & Fiscal Chgs	$8,762,075	66.8%	33.2%	$5,853,066	$2,909,009	$63	$20	$273
Expenses Related to Debt	$418,996	66.8%	33.2%	$279,889	$139,107	$3	$1	$3
Total Expenditures	$142,924,999			$99,758,672	$42,816,927	$1,075	$299	$1,323
SURPLUS (DEFICIT)	$3,440,145			($15,393,186)	$18,550,933	($165)	$128	($197)

Source: Totals exclude some non-recurring sales tax revenue, permits and fees, reimbursements and developer contributions, as well as some non-recurring expenditures for inspections and street construction; basis for residential and commercial shares as follows: property tax, special assessments, sundry taxes and intergovernmental revenues on property value; sales tax on money income and taxable sales, including utilities; Federal funds based on type of expenditures; general government expenditures based on property value; planning, traffic engineering, street lighting and debt service on acreage; police and fire based on call data (see Capital Cost Memorandum); 911 is composite of police and fire; streets on VMT (Capital Cost Memo); capital outlays on VMT and acreage; adjustment for new units as follows: sales tax on 1.3 differential, wheel tax on higher average vehicle value/ownership, Federal funds and health and welfare costs assumed 80%; police, fire, parks and library costs on average cost differential; debt service cost based on amortized capital cost from Capital Cost Memo less current-funded capital per unit.

The characteristics of new development, on average, differ in some key respects from those of existing development. New residential units are more valuable, on average, than the average existing residential unit. For purposes of this study, the assessed value of the average new residential unit is estimated to be about 50 percent higher than that of the average for existing residential units in the City. The incomes of households occupying newly constructed residential units also tend to be higher on average than those of existing residents.

On the revenue side, these two factors cause new residential units (on average) to generate higher annually recurring sales and real property taxes—the City's two largest sources of revenue–and higher wheel tax proceeds. Similarly they also cause a somewhat lower level of federal revenues from income-sensitive federally-supported programs. On the expenditure side, new residential units tend to demand higher levels of service for some services (police, fire, parks and recreation) and moderately lower levels for health and welfare. The City's plans to increase service levels for its fire and library services are due, in part, to higher levels of demand from the development that has occurred in the City over the last decade.

Newer residential development also requires capital facilities. Due to the "lumpy" nature of capital facilities, some may have been constructed previously and some will need to be constructed over the next few years. The capital costs of a new single-family unit for streets, parks, libraries, police and fire have been estimated to be $6,122.[13] Based on the expected mix of new development, the net new cost for the average new residential unit (reflective of single-family detached, attached, multi-family, duplex and mobile home) is estimated to be $5,202. Amortization of this amount over a 20-year general obligation bond repayment schedule yields an annualized expense of $454 for the average new residential unit.

New construction also generates fee and permit revenue. These are charges for service that offset the City's costs for providing inspections, plan ans site review. The cost of these services is roughly equal to the amount of revenues charged, so this does not generate additional net revenues.

New residential development also generates sales taxes on building materials and supplies used to construct new units. The one-time (non-recurring) sales tax revenue attributable to the construction of an average new residential unit is estimated to be $563. After accounting for these factors, the average new residential unit is estimated to generate a net surplus of $366 in the first full year after construction and including the one-time sales tax revenues on building materials and supplies during the course of its construction. In the ensuing years, it would generate a net annually recurring deficit of $197.

[13]Duncan Associates and Public and Environmental Finance Associates, *Infrastructure Financing Study: Capital Cost Memorandum*, Table 1, September 2000.

UTILITY FUND ANALYSIS

Over the past decade, the City's utility system has accumulated substantial cash balances through its user rates. As of August, 1999, the City's water and wastewater funds fund had $8.69 and $17.16 million in unappropriated capital funds on hand that were generated from user rates in prior years. The City has recently returned to a 7-year water and wastewater cash flow projection for financial planning purposes. This is expected to cause it to generate lower surpluses than when it was using a 15-year cash flow projection. By the end of the third or fourth year of its current cash flow projection, all of the surplus cash balances on hand are anticipated to be expended on capital improvements and replacements, with the exception of the $1.5 million minimum operating balance requirement for each fund.

Once these surpluses are largely drawn down, the internal distribution of the City's user rates will have shifted. Currently, user rates generate surpluses over what is required to meet coverage requirements. By 2006, however, coverage ratios are expected to decline from 1.93 to 1.68 for the water system and from 3.39 to 1.79 for the wastewater system. Coverage ratios in FY 2006 will continue to be greater than the 1.50 coverage required in the first year after a bond issue and the 1.25 coverage required in years in which no bonds are issued.[14]

The City's water and wastewater utilities will require continued capacity expansion and other upgrades well beyond 2006. The extent to which these capital needs will affect water and wastewater user rates beyond 2006 will be determined by the need for continued improvements for regulatory compliance, additional capacity expansions to accommodate new growth, and the City's capital funding and financing policies.

Under the City's 7-year cash flow projection, there will be an internal shift in the composition of costs to be recovered through its user rates. Operating costs are expected to grow more rapidly than capital and debt related costs between 2000 and 2006. Combined, the water and wastewater system's operating costs are expected to increase by a factor of 1.35 while their capital related costs (inclusive of debt service) are expected to increase by a factor of 1.23. If maintained at these levels, newer development would make a lower contribution towards capital costs over a typical financing cycle. Beyond 2006, future capital needs and the City's financing policies will determine the relative distribution of costs, their impact on user rates and the contribution of new units towards the capital facilities required to serve them.

A greater reliance on other methods of financing capital improvements such as revenue bonds and/or capital recovery fees can reduce the need to forward fund large capital projects in the future from rate-generated user fees. These methods can help to assure that future users make an equitable contribution to the cost of facilities to serve them even if there continue to be internal shifts in the composition of the water and wastewater systems costs and user rates.

[14] The City's cash flow analysis forecasts the water system debt service coverage ratio to decline from 1.93 to 1.68 in 2006 and from 3.39 to 1.79 for the wastewater system.

The analysis in this section assumes that over a 25 year period, new residential development will contribute towards debt service and pay-go[15] capital improvements on the basis of the average of these costs during the last two years (FY 2005 and 2006) of the City's current cash flow projections. During these last two years, the average coverage factor is forecast to be 1.77 for the water system and 1.88 for the wastewater system.

Water

Between FY 1999 and FY 2006, the City anticipates $71.1 million in capital improvements and replacements to its water system. Of this amount, approximately $25.0 million (about 35 percent) would be financed through long-term debt instruments such as revenue bonds. The balance would be funded through current user charges and capital funds on hand that were generated by user charges in prior years. As of August, 1999, the City had $8.69 million of uncommitted cash balances on hand. This includes the minimum operating revenue requirement of $1.5 million; the remainder covers appropriations in the following fiscal year.

The City currently anticipates a series of three consecutive water rate increases totaling about 18 percent beginning in FY 2002.[16] These rate increases will be used, in part, to continue to fund its water capital improvement programs out of current revenues.

The average pay-go capital portion embedded in the system's user fees for 2005 and 2006 is estimated to be 41 cents per thousand gallons of water usage. The average new single-family detached unit is estimated to use about 308 gallons of water per average day. Accordingly, the it will contribute about $46.56 for non-debt supported capital outlays per year. Over 25 years, this amounts to $1,164.

The average debt service in 2005 and 2006 is equivalent to a charge of about 45 cents per thousand gallons of water use. Accordingly, the average new single-family detached unit will contribute about $51 in annual debt service. Debt service, however, is a fixed amount and tends to decline over time relative to inflation and other costs. Discounted at 6 per cent interest for 25 years, this amounts to a contribution of $652 per unit. Accordingly, the average new single-family detached unit will contribute a total of about $1,816 to the water system's capital improvements over the 25-year period beginning in 2006. With estimated capital costs of $2,909, the average new single-family detached unit will generate a capital deficit of about $1,093 over a typical financing cycle.

[15] "Pay-go" (sometimes also referred to as "pay-as-you-go") refers to the practice of funding major capital improvements out of current revenues or user charges.

[16] These are prospective only. Whether rates are increased will depend upon a number of factors including weather, fuel costs, construction bids and the general economy. In past years, some rate increases that were foreseen in the City's cash flow projections were not implemented.

Wastewater

Between FY 1999 and FY 2006, the City anticipates $65.5 million in capital improvements and replacements to its wastewater system. Of this amount, approximately $24.7 million (about 37 percent) would be financed through long-term debt instruments such as revenue bonds. The balance would be funded through current user charges and capital funds on hand that were obtained through user charges in prior years. As of August, 1999, the City had $17.2 million of uncommitted cash balances on hand that were generated from user fees in prior years. This includes the minimum operating revenue requirement of $1.5 million; the remainder covers appropriations in the following fiscal years.

City officials anticipate one rate increase of 6.82 percent between FY 2000 and FY 2006.[17] Since capital funds collected through user charges in previous years are expected to be largely expended by FY 2006, additional major capital improvements thereafter could require the City to increase its user fees after that time if it continues to primarily fund capital facilities through pay-go capital.

The average pay-go capital portion embedded in the system's user fees for 2005 and 2006 is about 21 cents per thousand gallons of water usage. The average new single-family detached unit is estimated to use about 308 gallons of water per average day. Accordingly, it will contribute about $23.06 for pay-go supported capital outlays per year. Over 25 years, this amounts to $577.

The average debt service in 2005 and 2006 is equivalent to a charge of about 17 cents per thousand gallons of water use. Accordingly, the average new single-family detached unit will contribute about $19 in annual debt service. Debt service, however, is a fixed amount and tends to decline over time relative to inflation and other costs. Discounted at 6 per cent interest for 25 years, this amounts to a contribution of $243 per unit. Accordingly, the average new single-family detached unit will contribute a total of about $820 to the wastewater system's capital improvements over the 25-year period beginning in 2006. With estimated capital costs of $1,369, the average new single-family detached unit will generate a capital deficit of about $549 over a typical financing cycle.

[17] This rate increase is prospective only. Whether rates are increased will depend upon a number of factors including weather, fuel costs, construction bids and the general economy. In past years, some rate increases that were foreseen in the City's cash flow projections were not implemented.

Table 8
UTILITY FUND CAPITAL COST ANALYSIS

	Water	Wastewater
Average Annual Capital Outlay Net of Bonds	$5,645,615	$2,796,482
Average Annual Usage (1,000 gal.)	13,631,807	9,542,265
Pay-Go Capital Funding per 1,000 gal.	$0.4142	$0.2931
Average Annual Debt Service	$6,185,133	$2,307,700
Average Annual Usage (1,000 gal.)	13,631,807	9,542,265
Debt Service per 1,000 gal.	$0.4537	$0.2418
Residential Usage per capita (gpcd)	110	77
Average Household Size, Single-Family Unit	2.8	2.8
Average Daily Usage, Single-Family Unit (gpd)	308	216
Days per Year	365	365
Average Annual Usage, Single-Family Unit (1000 gal)	112.42	78.69
Average Annual Pay-Go per Single-Family Unit	$46.56	$23.06
Average Annual Debt Service per Single-Family Unit	$51.00	$19.03
25-Year Pay-Go Contribution per Single-Family Unit	$1,164	$577
25-Year Debt Service per Single-Family Unit (NPV*)	$652	$243
Total 25-Year Capital Contribution per Single-Family Unit	$1,816	$820
Total Capital Cost per Single-Family Unit	$2,909	$1,369
Net Surplus (Deficit) per Single-Family Unit	($1,093)	($549)

* net present value based on 6% discount rate
Source: Annual capital outlay and debt service and annual water usage are averages of 2005 and 2006 figures from "Lincoln Water System 7-Year Cash Flow Projection" and "Lincoln Sewer System 7-Year Cash Flow Projection," July 6, 2000; average residential water usage from Black & Veatch, *Water Distribution System Master Plan Report for Lincoln Water System*, December 1995; average household size of single-family detached from 1990 US Census. Average annual capital outlay, pay-go, debt service and pay-go contributions based on average of final two years of water and sewer 7-year cash flow projection. Annual and per capita wastewater usage is estimated at 70 percent of water usage, since actual average daily residential wastewater generation per capita (excluding inflow and infiltration) is about 30 percent lower than water use.

Lincoln Electric System

The Lincoln Electric System (LES) is a well-diversified system. LES' primary revenue sources are from retail electric sales to customers located within its service boundaries and also through the sale of its reserve generating capability to other electrical systems. Demand for electricity with LES' service area has been steadily increasing due to increased numbers of residential, commercial and industrial customers along with higher per capita and household incomes (which correlate with greater electrical consumption).

In October of 2000, LES and Norris Public Power District (the utility serving customers adjacent to the Lincoln Electric System) have approved an agreement to jointly plan for the growth of Lincoln and to transfer service area and customers to LES on an orderly basis. As a result, the two utilities agree that LES will be able to maintain and serve a buffer area which is a minimum of one to one and a half miles outside the city limits of Lincoln. With this agreement, LES believes it will be able to expand infrastructure and support the growth of the city in the same manner that is currently being used.